

10/649,536

CLAIMS:

1. (original) A method of manufacturing an insulated component, the method comprising:
 - providing a substrate having a surface;
 - depositing a layer of ceramic insulating material on the substrate surface; and
 - forming a continuous gap in a top surface of the layer of ceramic insulating material to define segments therein, the continuous gap having a width at the top surface of less than 100 microns.
2. (original) The method of claim 1, further comprising forming the continuous gap to have a width of less than 75 microns.
3. (original) The method of claim 1, further comprising forming the continuous gap to have a width of less than 50 microns.
4. (original) The method of claim 1, further comprising forming the continuous gap to have a depth that does not extend through an entire thickness of the layer of ceramic insulating material.
5. (original) The method of claim 1, further comprising forming the continuous gap using a laser engraving process.
6. (original) The method of claim, 1, further comprising:
 - forming a first plurality of continuous gaps to a first depth into the layer of ceramic insulating material; and
 - forming a second plurality of continuous gaps to a second depth into the layer of ceramic insulating material.

10/649,536

7. (original) The method of claim 1, further comprising forming the continuous gap by:

exposing the top surface to a first pass of laser energy having a first parameter to form the continuous gap; and

exposing the continuous gap to a second pass of laser energy having a second parameter different than the first parameter to change a geometry of the continuous gap.

8. (original) The method of claim 7, wherein the second pass of laser energy has a wider beam footprint than that of the first pass of laser energy.

9. (original) The method of claim 7, wherein the second pass of laser energy has a pulsation frequency that is greater than that of the first pass of laser energy.

10. (original) The method of claim 1, further comprising forming the continuous gap using laser energy delivered through a fiber optic cable.

11. (original) The method of claim 1, further comprising forming the continuous gap with a laser engraving process using a lens having a focal length of at least 160 mm in order to reduce accumulation of molten material splashed onto the lens during the laser engraving process.

12. (original) The method of claim 1, further comprising forming the continuous gap to follow a direction of a fluid stream over the top surface when the component is in use.

13. (original) The method of claim 1, further comprising forming a plurality of continuous gaps in the top surface at a spacing between adjacent gaps of less than 750 microns.

10/649,536

14. (original) The method of claim 13, further comprising forming the plurality of continuous gaps in the top surface at a spacing between adjacent gaps of less than 500 microns.

15. (original) The method of claim 13, further comprising forming the plurality of continuous gaps in the top surface at a spacing between adjacent gaps in a range of 500-750 microns.

16. (original) The method of claim 1, further comprising:
depositing a first layer of ceramic insulating material on the substrate surface;
forming a first plurality of continuous gaps in a top surface of the first layer;
depositing a second layer of ceramic insulating material on the top surface of the first layer; and
forming a second plurality of continuous gaps in a top surface of the second layer.

17. (original) The method of claim 16, further comprising forming each of the gaps in the top surface of the second layer to have a width at the top surface of less than 100 microns.

Claims 18-35 (cancelled).